

Harvard University are the following: About 100 yards north of the Gibson-Schriever road, about 1.3 miles east of the junction with U.S. Highway 90, Terrebonne Parish, on hummock of humus at base of gum tree in cypress swamp, about 8 inches above water, Jan. 23, 1960, *Reese* (with John, Semmes, and Dick Lynch) No. 2576. About 0.5 mile west of U.S. Highway 90 bridge over Bayou Boeuf, about 0.25 miles north of the highway, St. Mary Parish, on hummock of humus in cypress swamp, about 6 to 8 inches above water, Jan. 23, 1960, *Reese (et al.)* No. 2577.

Dr. Clair Brown, of Louisiana State University, has informed me of one other record of *Psilotum* from the wild in Louisiana. According to Dr. Brown the name of the finder is unknown, and no specimen was preserved. The plants were found in the vicinity of Schriever, in the same general area dealt with in this note. *Psilotum* is otherwise known from Louisiana from specimens found at a nursery near New Orleans, and from Lynch's orchid houses in Lafayette, where it was recognized by Mr. Lynch after being found in the swamps. Doubtless it was brought in initially with the *Osmunda* bases and very likely is of rather wide occurrence in the state in greenhouses.

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A Key to American Dryopteris Species Based on Characters of the Perispore¹

FERN WARD CRANE

In 1954, Dr. Edgar T. Wherry collected a number of *Dryopteris* plants to be used specifically for cytological and palynological studies. Among the rhizomes sent to Dr. Stanley Walker,² University of Liverpool, there were some *D. × Leedsii* from the type locality in Maryland.³ It was surprising to learn from him

¹Presented at the Ninth International Botanical Congress, Montreal, August, 1959.

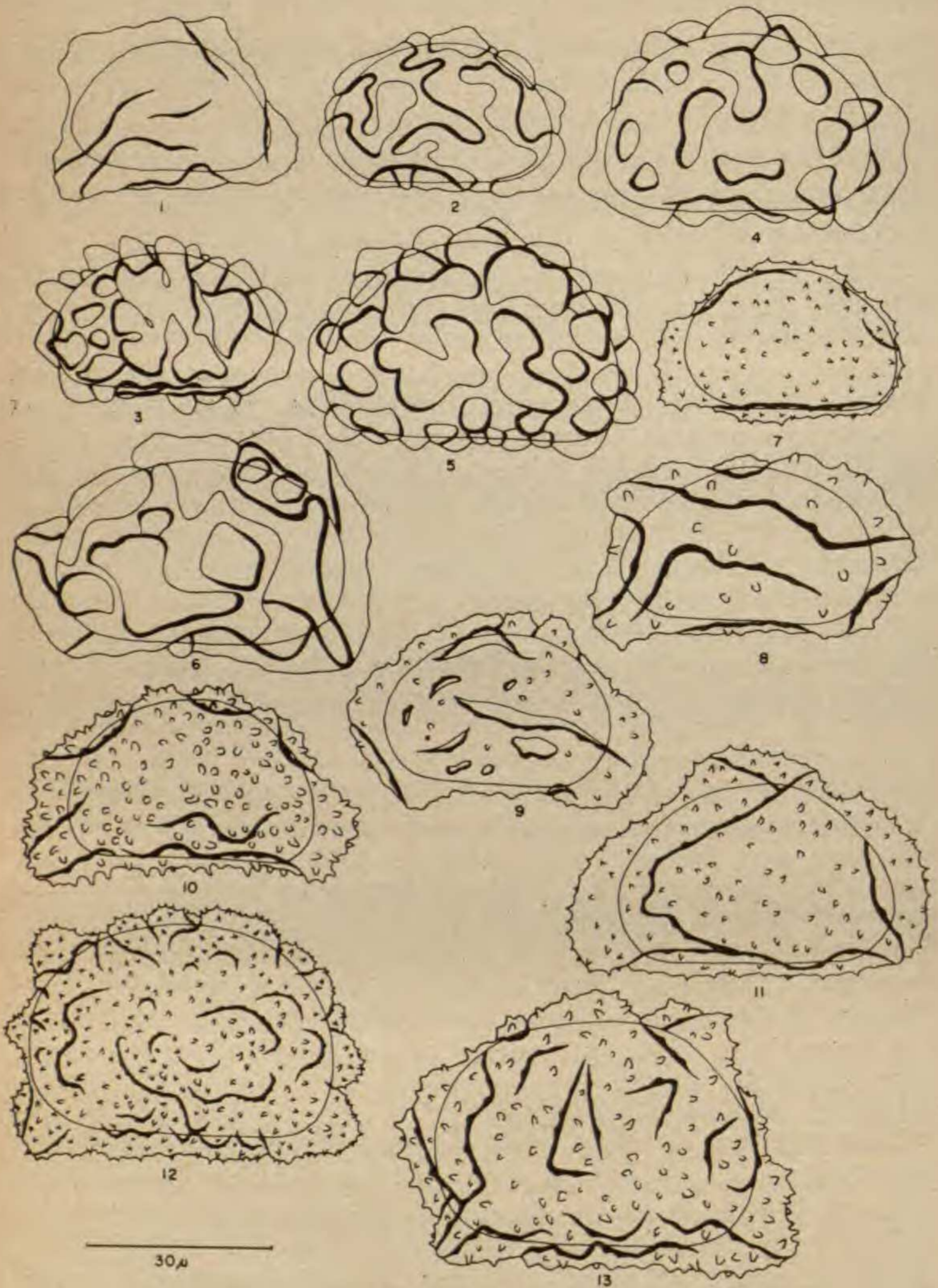
²Walker, S. Cytotaxonomic Studies of Some American Species of *Dryopteris*. This JOURNAL 49: 104-112. 1959.

³Darling, Thomas Jr. Recent Field Notes. This JOURNAL 49: 117-122. 1959.

that only half of these plants were diploid hybrids, the remainder being fertile tetraploids, but an examination of the spores confirmed this report. In another set of these ferns, collected in 1956, it was a simple matter to predict the results of chromosome counts when palynological evidence was considered. This tetraploid *Dryopteris* is the new species described below:
DRYOPTERIS Wherryi F. W. Crane, sp. nov.

Folia ca. 120–140 cm. longa, stipitibus ca. 30–40 cm. longis, 4–6 mm. diam., viridi-stramineis, basi compluribus paleis brunneis translucide late marginatis dense obtectis, eis sursum paucioribus et minoribus; laminae late lineari-lanceolatae, 90–100 cm. longae, 25–30 cm. latae, apice attenuatae, basin versus vix angustatae, pinnato-pinnatifidae, rhache colore stipitis, paleis capilliformibus ornata; pinnae 16–20-jugae, inferiores longe petiolatae, superiores subsessiles, alternatae, inferiores vix reductae, ca. 12–18 cm. longae, 3–5 cm. latae, longe lanceolatae, paulo distantes vel leviter sese tangentes, pinnatifidae, apice longe serrato-acutae, basales et apicales pinnatifido-serratae; pinnulae 2–3 cm. longae, 5–10 mm. latae, lineari-lanceolatae vel anguste triangulares, costam versus ampliatae, alas \pm distincte formantes, oppositae vel suboppositae, regulariter serratae, dentibus acutis vel subacutis, in spinulos sensim replicatos coarctatis, supra olivaceo-virides, subtus griseo-virides; costa albido-virescens, \pm late alata, paleis filiformibus translucentibus hic inde obtecta, supra canaliculata; sori usque ad 8-jugi, evidenter inframediales, indusio lato glabrato obtecti; sporae magnae, nigrescenti-brunneae, $28\mu \times 46\mu$, perisporio excluso; perisporium glabrum, saepius alis latis instructum, hinc inde alis angustioribus interspersis, \pm continuis et qua de causa sculpturam formantibus. A Stanley Walker Universitatis Liverpoolensis mihi relatum filicem tetrapolideam esse, chromosomatibus normaliter conjungentibus. Orta, ut videtur, reduplicatione chromosomatium hybridae diploideae *Dryopteridis* \times *Leedsii*. Detecta a Edgar T. Wherry, cui dedicata.

Leaf 120–140 cm. long; stipe 30–40 cm. long, 4–6 mm. wide, greenish-straw color, the base densely covered with brown scales with wide translucent margins, upwardly the scales smaller and rather fewer; blade broadly linear-lanceolate, 90–100 cm. long, 25–30 cm. wide, attenuate at apex, scarcely narrowed toward base, pinnate-pinnatifid, bearing hair-like scales; pinnae 16–20 pairs, the lower elongate-petiolate, the upper nearly sessile, alternate, the lower scarcely reduced, 12–18 cm. long, 3–5 cm.



SPORES OF DRYOPTERIS SPECIES, FIGURE NUMBERS CORRESPONDING TO SPECIES NUMBERS IN KEY; FIGS. 6, 9 PREVIOUSLY UNPUBLISHED

wide, elongate-lanceolate, slightly spaced, pinnatifid, the tip long acute-toothed, the basal and terminal pinnatifid-serrate; pinnules 2-3 cm. long, 5-10 mm. wide, linear-lanceolate or narrowly triangular, enlarged toward costa, wing \pm distinctly developed, opposite or subopposite, uniformly serrate, the teeth acute or subacute, the spinules distinctly folded back, olive-green above, beneath gray-green; costa whitish-green, \pm broadly winged, covered with translucent filiform scales, grooved above; sori up to 8 pairs, manifestly inframedial, the indusium broad, glabrous; spores large, dark brown, $28\mu \times 46\mu$, excluding the perispore; perispore glabrous, usually furnished with wide wings interspersed with narrow wings, \pm continuous so as to appear sculptured.

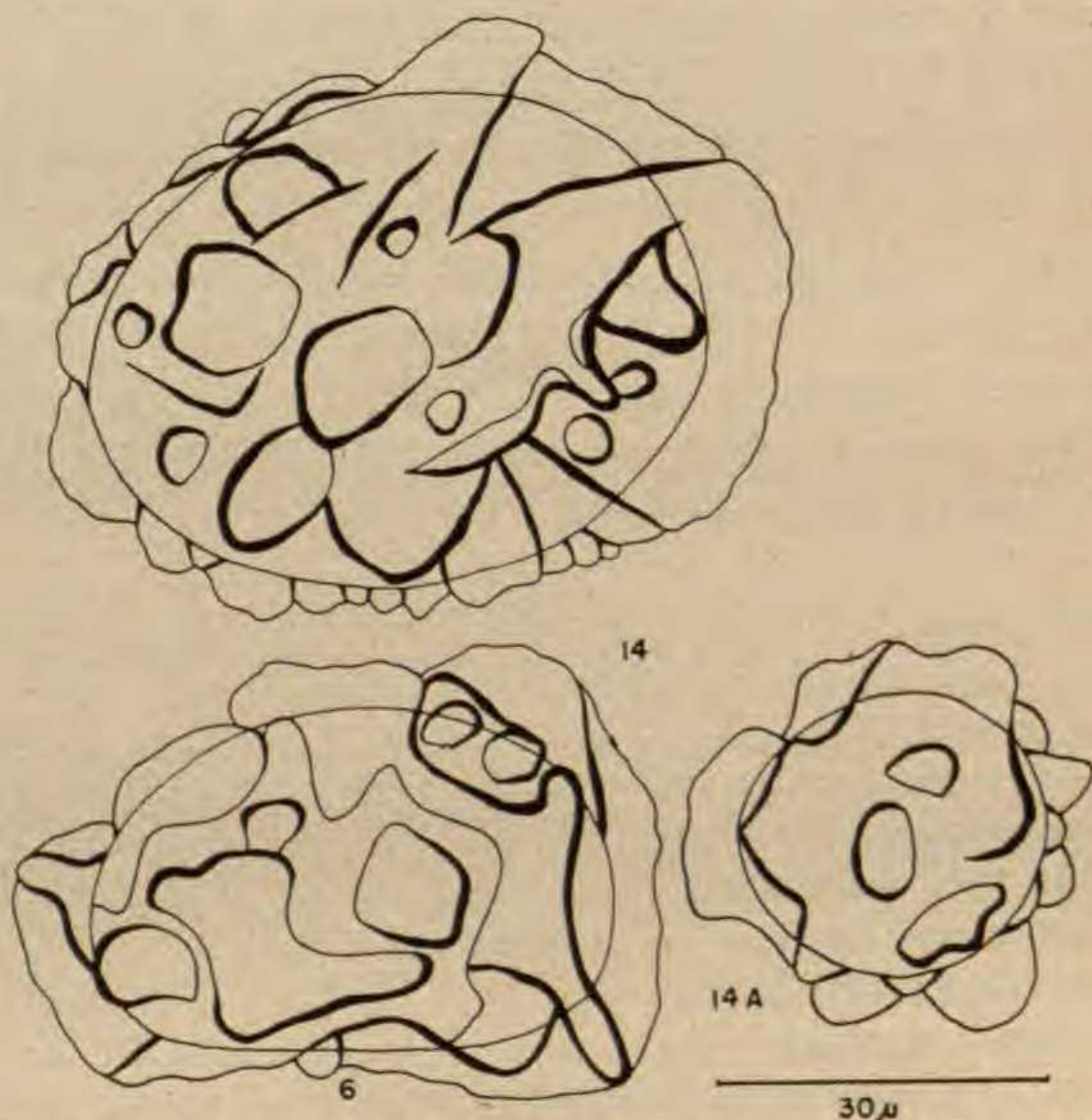


FIG. 6, *DRYOPTERIS WHERRYI*. FIGS. 14, 14A. *DRYOPTERIS* \times *LEEDSII*; TYPICAL HYBRID SPORES, USUALLY A FEW LARGE AND MISSHAPEN, THE MAJORITY SMALL AND ABORTED

HOLOTYPE in the United States National Herbarium, nos. 2, 258,784 and 2,258,785, collected by Edgar T. Wherry, August 15, 1956, 3 miles below Conowingo Dam, Harford County, Maryland. (Herbarium F. W. Crane, no. 5615). Isotypus: Herbarium of the University of Pennsylvania.

This fern may be distinguished from *D. × Leedsii* by the scales extending in abundance only to the mid-stipe, the lower segments of sterile pinnae little-spaced and the gap-width less than half the segment-width, the sori tending to lie nearer the midrib than the margin, and the spores being normal. Dr. Stanley Walker, University of Liverpool, reported to the author that the fern is tetraploid, the chromosomes pairing normally, and that apparently it has arisen through doubling of the chromosomes of the hybrid diploid, *Dryopteris × Leedsii* Wherry. It was discovered by Dr. Edgar T. Wherry, to whom it is dedicated.

Dryopteris Wherryi was illustrated by Dr. S. Walker recently as *Dryopteris "Leedsii"* (tetraploid); it is the left hand figure of *Plate 11* of his article,⁴ which by a printer's error is marked "Fig. 10 (left): *Dryopteris celsa*" but which is actually fig. 8, *D. "Leedsii"* (tetraploid), the right hand frond being the true *D. Leedsii* (diploid). The correction is made in the Errata.⁵

The author wishes to thank Dr. E. T. Wherry and Dr. S. Walker for their cooperation, and Dr. H. P. Fuchs for the Latin version of the description.

KEY

A. Spinules absent.

I. Spores small, 22-24 μ x 32-37 μ .

Wings simple, wide 1. *Goldiana*

Wings narrow, more or less continuous so as to produce a sculptured appearance.

Wings few, continuous 2. *marginalis*

Wings many, smaller, less continuous 3. *arguta*

II. Spores large, 26-34 μ x 41-50 μ .

Wings small, rounded.

Wings few, some wide ones interspersed 4. *Filix-mas*

Wings numerous, the appearance tuberculate 5. *fragrans*

Wings mostly wide, though with some smaller ones, continuous as in *marginalis* 6. *Wherryi*

B. Spinules present.

I. Spores small, 24-24 μ x 36-41 μ .

⁴Walker, S. Cytotaxonomic Studies of Some American Species of *Dryopteris*. This JOURNAL 49: 104-112. 1959.

⁵This Journal, 49: 160. 1959.

Wings few, simple.

Wings narrow, set with small sharp-tipped spinules7. *intermedia*

Wings wide, with a few large blunt-tipped spinules8. *celsa*

Wings more numerous, wide, simple; smaller wings also present;
spinules blunt-tipped9. *ludoviciana*

II. Spores medium to large.

Size medium, 26–28 μ x 42–45 μ .

Wings fairly wide; spinules mostly large, decidedly blunt-tipped
.....10. *spinulosa*

Wings wider; spinules mostly small, sharp-tipped.....11. “*dilatata*”⁶

Size large, 31–33 μ x 48–52 μ .

Wings numerous, small, rounded; spinules many, sharp-tipped
.....12. *crinata*

Wings fewer, wide, characteristically angular; spinules widely
spaced, blunt-tipped13. *Clintoniana*

174 Summit Avenue, Summit, New Jersey.

⁶Proper name for eastern North American plant uncertain.

Taxonomic Notes on Ferns, I

C. V. MORTON

ATHYRIUM Lilloi (Hicken) Morton, *comb. nov.*

Nephrodium Lilloi Hicken, Anal. Soc. Cient, Argent. **63**: 8.
tab. [2]. 1907. Type: La Casita, Valle del Rio Canasor-
cona, Province of Tucumán, Argentina, 1700 meters alti-
tude, Jan. 26, 1903, *M. Lillo* 2932.

Dryopteris Lilloi Hicken, Apuntes Hist. Nat. Buenos Aires
1: 151. 1909.

This species has never been placed. In Christensen's “A
Monograph of the Genus *Dryopteris*”¹ it is listed as dubious,
said to be probably a valid species allied to *Dryopteris connexa*,
following Hicken's original comparison. Hicken himself men-
tioned in his comments that the indusium appeared to be lateral,
recalling that of *Asplenium* or *Athyrium*.

Material from Tucuman in the U. S. National Herbarium
which agrees entirely with the original description and with the
illustration (both the drawing and the photograph of the type)
shows that this species really is an *Athyrium*, and not a *Nephro-*

¹Part 2: 125. 1920.